Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A method for purifying gellan, comprising:

(a) combining DNase and gellan, the gellan being contaminated with nucleic acid, thereby providing a mixture; and

(b) maintaining the mixture of step (a) under conditions where the DNase degrades at least some of the nucleic acid, thereby providing purified gellan.

2. (Withdrawn) The method of claim 1 wherein the gellan is contaminated with more than 100 ppm nucleic acid based on the total weight of gellan and nucleic acid.

3. (Withdrawn) The method of claim 1 wherein the purified gellan is contaminated with less than 10 ppm nucleic acid based on the total weight of gellan and nucleic acid.

4. (Withdrawn) The method of claim 1 wherein the purified gellan is contaminated with less than 50% of the nucleic acid that contaminated the gellan of step (a).

5. (Withdrawn) The method of claim 1 wherein the mixture further comprises a DNase activating agent.

6. (Withdrawn) The method of claim 5 wherein the DNase activating agent is sodium azide.

7. (Withdrawn) The method of claim 1 wherein the mixture of step (a) is maintained at 30-45°C for at least 1 hour.

8. (Withdrawn) The method of claim 1 further comprising the step of monitoring the nucleic acid degradation.

9. (Withdrawn) The method of claim 1 further comprising deactivating the DNase present in admixture with the purified gellan.

10. (Withdrawn) The method of claim 9 wherein the DNase is deactivated by heating the DNase in admixture with the purified gellan to an inactivating temperature in excess of 50°C.

11. (Withdrawn) The method of claim 1 wherein the DNase is DNase 1.

12. (Withdrawn) The method of claim 1 further comprising adding boric acid to the gellan or the purified gellan.

13. (Withdrawn) The method of claim 1 further comprising adding imidazole to the gellan or the purified gellan.

14. (Withdrawn) The method of claim 1 further comprising adding a size-separation property modifying polymer to the gellan or the purified gellan.

15. (Withdrawn) The method of claim 14 wherein the size-separation property modifying polymer is poly(ethylene oxide).

16. (Currently amended) A gellan composition prepared by ~~the~~ a method ~~of any of claims 1-15~~ that is selected from:

(a) a method for purifying gellan, comprising (i) combining DNase and gellan, the gellan being contaminated with nucleic acid, thereby providing a mixture, and (ii) maintaining the mixture under conditions where the DNase degrades at least some of the nucleic acid, thereby providing purified gellan,

(b) the method of (a) wherein the gellan is contaminated with more than 100 ppm nucleic acid based on the total weight of gellan and nucleic acid,

(c) the method of (a) wherein the purified gellan is contaminated with less than 10 ppm nucleic acid based on the total weight of gellan and nucleic acid,

(d) the method of (a) wherein the purified gellan is contaminated with less than 50% of the nucleic acid that contaminated the gellan of step (a)(i),

(e) the method of (a) wherein the mixture further comprises a DNase deactivating agent,

(f) the method of (e) wherein the DNase deactivating agent is sodium azide,

(g) the method of (a) wherein the mixture is maintained at 30-45°C for at least 1 hour,

(h) the method of (a) further comprising the step of monitoring the nucleic acid degradation,

(i) the method of (a) further comprising deactivating the DNase present in admixture with the gellan,

(j) the method of (a) wherein the DNase is deactivated by heating the DNase in admixture with the purified gellan to an inactivating temperature in excess of 50°C,

(k) the method of (a) wherein the DNase is DNaseI,

(l) the method of (a) further comprising adding boric acid to the gellan or the purified gellan,

(m) the method of (a) further comprising adding imidazole to the gellan or the purified gellan,

(n) the method of (a) further comprising adding a size-separation property modifying polymer to the gellan or the purified gellan, and

(o) the method of (n) wherein the size-separation property modifying polymer is poly(ethylene oxide).

17. (Original) A gellan composition comprising water and gellan, the composition containing either no nucleic acid or nucleic acid at a concentration of less than 10 ppm based on the weight of the gellan.

18. (Original) The gellan composition of claim 17 that contains either no nucleic acid or nucleic acid at a concentration of less than 5 ppm based on the weight of the gellan.

19. (Original) The gellan composition of claim 17 that contains either no nucleic acid or nucleic acid at a concentration of less than 1 ppm based on the weight of the gellan.

20. (Original) A composition suitable for use in preparing an electrophoresis medium, comprising:

(a) gellan; and

(b) either no nucleic acid or nucleic acid at a concentration of less than 10 ppm nucleic acid, based on the weight of gellan.

21. (Original) The composition of claim 20 further comprising a size-separation property modifying polymer.

22. (Original) The composition of claim 21 wherein the size-separation property modifying polymer is poly(ethylene oxide).

23 (Original) The composition of claim 20 further comprising a buffer composition suitable for maintaining said composition at a pH of 5-9.

24. (Original) The composition of claim 23 wherein the buffer comprises imidazole or a salt thereof and boric acid or a salt thereof.

25. (Original) The composition of claim 20 further comprising EDTA or a salt thereof.

26. (Original) The composition of claim 20 further comprising a size-separation property modifying polymer, imidazole or a salt thereof, boric acid or a salt thereof, and EDTA or a salt thereof.

27. (Original) The composition of claim 20 further comprising a cross-linking agent.

28. (Original) The composition of claim 27 wherein the cross-linking agent is cystamine.

29. (Original) A kit comprising:

(a) a matrix composition comprising gellan and nucleic acid at a concentration of less than 10 ppm based on the weight of the gellan;

(b) buffer; and

(c) cross linking agent.

30. (Original) The kit of claim 29 wherein the nucleic acid is present in the matrix composition at a concentration of less than 5 ppm based on the weight of the gellan.

31. (Original) The kit of claim 29 wherein the matrix composition further comprises a size-separation property modifying polymer.

32. (Currently Amended) The kit of claim ~~29~~ 31 wherein the size-separation property modifying polymer is poly(ethylene oxide).

33. (Original) The kit of claim 29 further comprising a size-separation property modifying polymer.

34. (Currently amended) The kit of claim 33 wherein the size-separation property modifying polymer is ~~poly(alkylenceoxide)~~ poly(alkylene oxide).

35. (Original) The kit of claim 29 wherein the matrix composition further comprises boric acid or a salt thereof.

36. (Original) The kit of claim 29 wherein the matrix composition further comprises imidazole or a salt thereof.

37. (Original) The kit of claim 29 wherein the matrix composition has a pH between 6.5 and 8.5.

38. (Original) The kit of claim 29 wherein the matrix composition further comprises a DNA stain.

39. (Original) The kit of claim 29 wherein the buffer comprises imidazole or a salt thereof.

40. (Original) The kit of claim 29 wherein the buffer comprises boric acid or a salt thereof.

41. (Original) The kit of claim 29 wherein the buffer comprises imidazole or a salt thereof, and boric acid or a salt thereof.

42. (Original) The kit of claim 29 wherein the cross linking agent is cystamine.

43. (Withdrawn) A method of performing electrophoresis comprising

(1) forming an electrophoresis medium by combining ingredients comprising:

(a) a matrix composition comprising gellan, nucleic acid at a concentration of less than 10 ppm based on the weight of the gellan, and size-separation property modifying polymer;

(b) buffer; and

(c) cross linking agent; and

(2) applying an electric field across the medium.

44. (Withdrawn) An electrophoresis apparatus comprising:

(a) a cross linked matrix formed by combining gellan, cross linking agent, nucleic acid at a concentration of less than 10 ppm based on the weight of the gellan, buffer, and size-separation property modifying polymer; and

(b) an apparatus for exposing said cross linked matrix to an electric field.

45. (Withdrawn) A method for recovering a biological material, comprising:

(a) adding a mixture comprising a biological material to a cross linked electrophoresis medium, the medium being formed by a method comprising combining a cross linking agent and gellan contaminated with less than 10 ppm nucleic acid based on the weight of the gellan;

(b) exposing the medium to an electric field to separate in said medium said biological material from other components in the mixture;

(c) removing a zone of the medium containing the biological material from the medium;

(d) exposing the removed zone to an agent that reverses the cross linking of the medium, to provide liquefied electrophoresis medium; and

(e) separating the biological material from the liquefied electrophoresis medium, thereby recovering the biological material.

46. (Withdrawn) The method of claim 45 wherein the cross linking agent is a divalent metal cation and the agent that reverses the cross linking is a chelating agent.

47. (Withdrawn) The method of claim 45 wherein the cross linking agent is a diamine and the agent that reverses the cross linking is pH modifying agent.

48. (Withdrawn) The method of claim 45 wherein the cross linking agent comprises a disulfide bond, and the agent that reverses the cross linking is a reducing agent.

49. (Withdrawn) A composition comprising water, imidazole or a salt thereof, and boric acid or a salt thereof.

50. (Withdrawn) The composition of claim 49 having a pH between 5 and 9.

51. (Withdrawn) The composition of claim 49 having an imidazole or salt thereof concentration between 10 and 100 mM.

52. (Withdrawn) The composition of claim 49 having a boric acid or salt thereof concentration between 50 and 500 mM.

53. (Withdrawn) The composition of claim 49 having an imidazole or salt thereof concentration between 20 and 60 mM and a boric acid or salt thereof concentration between 100 and 300 mM.

54. (Withdrawn) The composition of claim 49 further comprising EDTA or a salt thereof.